

Notice of Allowability

Application No.

09/549,647

Examiner

John R. Hardee

Applicant(s)

SEYDEL ET AL.

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1751

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to applicant's petition, CPA and amendment.
2. ☒ The allowed claim(s) is/are 1 and 4-20.
3. ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 - a) ☐ All b) ☐ Some* c) ☐ None of the:
 1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

* Certified copies not received: _____.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.
THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.

4. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
 5. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
 - (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached
 - 1) ☐ hereto or 2) ☐ to Paper No./Mail Date _____.
 - (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date _____.
- Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
6. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

Attachment(s)

1. ☐ Notice of References Cited (PTO-892)
2. ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3. ☐ Information Disclosure Statements (PTO/SB/08),
Paper No./Mail Date _____
4. ☐ Examiner's Comment Regarding Requirement for Deposit
of Biological Material
5. ☐ Notice of Informal Patent Application
6. ☐ Interview Summary (PTO-413),
Paper No./Mail Date _____
7. ☒ Examiner's Amendment/Comment
8. ☒ Examiner's Statement of Reasons for Allowance
9. ☐ Other _____

DETAILED ACTION

Continued Examination Under 37 CFR 1.114

1. The request for a continued prosecution application (CPA) under 37 CFR 1.53(d) filed on May 2, 2002 is acknowledged. 37 CFR 1.53(d)(1) was amended to provide that the CPA must be for a design patent and the prior application of the CPA must be a design application that is complete as defined by 37 CFR 1.51(b). See *Elimination of Continued Prosecution Application Practice as to Utility and Plant Patent Applications*, final rule, 68 *Fed. Reg.* 32376 (May 30, 2003), 1271 *Off. Gaz. Pat. Office* 143 (June 24, 2003). Since a CPA of this application is not permitted under 37 CFR 1.53(d)(1), the request for a CPA is being treated as a request for continued examination of this application under 37 CFR 1.114.

EXAMINER'S AMENDMENT

2. An examiner's amendment to the record appears below. Authorization for this examiner's amendment was given in a telephone interview with Mr. William Lee on February 12, 2007.

The application has been amended as follows:

At line 1 of the specification, insert ---This is a continuation of US Patent Application No. 09/233,254, filed January 19, 1999, now abandoned.---

1. (Amended) An enzyme-containing granule comprising:

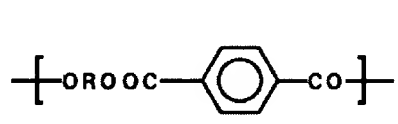
(a) a core granule comprising one or more enzyme particles; and

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a water-soluble polymer coating therefor which completely encapsulates said enzyme particles, said polymer coating comprising a water-soluble or water-dispersible polyester resin, which comprises a reaction product of 20%-50% by weight of waste terephthalate polymer, 10- 40% by weight of at least one glycol and 5-25% by weight of at least one oxyalkylated polyol, 20-50% by weight of isophthalic acid and 3-15% by weight of trimellitic acid or trimellitic anhydride.

2.-3. (Cancelled)

4. (Amended) A granule of claim 1, wherein the water-soluble or water-dispersible polyester resin comprises the reaction product of waste terephthalate of the unit formula



wherein R is the residue of an aliphatic or cycloaliphatic glycol of 2-10 carbons or of an oxygenated glycol of the formula $\text{HO}(\text{C}_x\text{H}_{2x}\text{O})_n\text{C}_x\text{H}_{2x}\text{OH}$, wherein x is an integer from 2-4 and n is 1-10 20-50% weight of isophthalic acid and 3-15% by weight of trimellitic acid or trimellitic anhydride.

5. (Original) A granule of claim 1, wherein the waste terephthalate polymer is polyethylene terephthalate, polybutylene terephthalate, poly(cyclohexane dimethanol terephthalate) or a mixture thereof.

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6. (Original) A granule of claim 1, wherein the glycol is ethylene glycol, diethylene glycol, triethylene glycol, cyclohexanedimethanol, propylene glycol, butylene glycol, neopentyl glycol, 1,5-pentanediol, 1,6-hexanediol or a mixture thereof.

7. (Original) A granule of claim 1, wherein the glycol is a mixture of diethylene glycol and neopentyl glycol.

8. (Original) A granule of claim 1, wherein the oxyalkylated polyol is glycerol, trimethylolpropane, trimethylolethane, pentaerythritol, erythritol or a monosaccharide, oxyalkylated with 5-30 moles of ethylene oxide, propylene oxide or a mixture thereof, per hydroxyl of the polyol.

9. (Original) A granule of claim 1, wherein the water-soluble or water-dispersible polyester resin further comprises 1-10% by weight of a polyol.

10. (Original) A granule of claim 3, wherein the water-soluble or water-dispersible polyester resin comprises a reaction product of 20-50% by weight of polyethylene terephthalate, 10-30% by weight of diethylene glycol, 1-10% by weight of pentaerythritol, 5-25% by weight of oxyalkylated glycerol of 5-30 oxyalkyl units per hydroxyl, 20-50% by weight of isophthalic acid and 3-15% by weight of trimellitic acid or trimellitic anhydride.

11. (Original) A granule of claim 3, wherein the water-soluble or water-dispersible polyester resin comprises a reaction product of 25-40% by weight of polyethylene terephthalate, 20-30% by weight of diethylene glycol, 1-10% by weight of pentaerythritol, 5-15% by weight of oxyethylated glycerine having 5-30 oxyethylene

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units per hydroxyl, 20-30% by weight of isophthalic acid and 5-10% by weight of trimellitic acid or trimellitic anhydride.

12. (Original) A granule of claim 1, wherein the core enzyme comprises at least one cleaning enzyme selected from the group consisting of amylase, protease, lipase, cellulase, oxidase and mixtures thereof.

13. (Original) A granule of claim 12, wherein the enzyme is an amylase.

14. (Original) A granule of claim 12, wherein the enzyme is a cellulase or a component thereof.

15. (Original) A detergent composition, comprising:

(a) 0.1-20% by weight, based on the composition, of the enzyme-containing granule as claimed in claim 1;

(b) 0.1-60% by weight, based on the composition, of a detergent builder;

(c) 0-20% by weight, based on the composition, of a surfactant selected from the group consisting of anionic, nonionic, cationic, ampholytic and zwitterionic surfactants or mixtures thereof; and

(d) optionally, water.

16. (Amended) A process for producing encapsulated enzyme-containing granule as claimed in claim 1, comprising:

(a) selecting a core enzyme; and

(b) contacting a granule of core enzyme with at least one water-soluble or water dispersible polyester resin, which comprises a reaction product of 20%-50% by weight of waste terephthalate polymer, 10-40% by weight of at least one glycol, 5-25%

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by weight of at least one oxyalkylated polyol; 20-50% by weight of isophthalic acid and 3-15% by weight of trimellitic acid or trimellitic anhydride, and removing any excess water by drying until a continuous film of solid polyester resin is formed around the granule core.

17. (Original) A process according to claim 16, in which the granule core is contacted by spraying with an emulsion of the water-soluble or water-dispersible polyester resin as claimed in claim 1.

18. (Original) A process according to claim 16, wherein the core enzyme is selected from the group consisting of amylase, protease, lipase, cellulase, oxidase and mixtures thereof.

19. (Original) A process according to claim 18, wherein the enzyme is an amylase.

20. (Original) A process according to claim 18, wherein the enzyme is a cellulase.

Should the changes and/or additions be unacceptable to applicant, an amendment may be filed as provided by 37 CFR 1.312. To ensure consideration of such an amendment, it MUST be submitted no later than the payment of the issue fee.

Allowable Subject Matter

3. Claims 1 and 4-20 are allowed.

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4. The following is an examiner's statement of reasons for allowance: Applicant's arguments are persuasive. The polymer of the WO is not the polymer of Salsman, and the WO does not provide motivation to make the polymers of Salsman.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

5. Any inquiry concerning this communication or earlier communications from the examiner should be directed to the examiner, Dr. John R. Hardee, whose telephone number is (571) 272-1318. The examiner can normally be reached on Monday through Friday from 8:00 until 4:30. In the event that the examiner is not available, his supervisor, Mr. Douglas McGinty, may be reached at (571) 272-1029.

The fax phone number for the organization where this application or proceeding is assigned is (571) 273-8100.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only.

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For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

A handwritten signature in black ink, appearing to read "J. Hardee", with a long horizontal flourish extending to the right.

John R. Hardee
Primary Examiner
February 12, 2007